

Training Program on Surge Analysis and Design of Surge Protection Systems

11th to 13th July 2019

Venue: Centre for Continuing Education, IISc

Training program on surge analysis and design of surge protection systems is being organized for engineers involved in pipeline design and construction. Till date 16 such programs were organized at IISc Bangalore with more than 500 participants from water boards, public health engineering, irrigation and rural water supply departments of states, consulting firms (Indian and Foreign), construction companies, pump and valve manufactures. Two exclusive programs were organized for public health department engineers of Rajasthan at Jaipur and Mizoram at Aizwal.

Lecture sessions will cover Estimation of friction losses; computation of pump head; system curve analysis; basic concepts of surge; effect of column separation; parameters influencing surge; interpretation of surge results; types of pipes; design criteria for surge protection; control of surge; surge protection devices; design of air vessel, one way surge tank, stand pipe; locating upsurge control devices like zero velocity valve, surge relief valve, air valve and air cushion valve; control of surge for gravity mains. Transient analysis for circulating water systems. Case studies in water transmission mains, lift irrigation schemes and CW systems.

Computer sessions will cover usage of Surge Analysis Program Version 2 software developed at Department of Civil Engineering, Indian Institute of Science, Bangalore for surge analysis, interpretation of results and design of surge protection systems with examples and data from projects.

Fee for the program is Rs. 18,000/- (plus 18% GST, total Rs. 21,240/-) per participant. Fee includes course material, lunch and teas. Fee can be paid through bank draft or multicurrency cheque drawn in favour of "The Registrar, Indian Institute of Science" payable at Bangalore on or before 5th July 2019. Any clarifications regarding payment contact Mr. C T Nagaraja, Section Officer, CCE through email so.cce@iisc.ac.in or at 080 2293 2247/2055.

Limited accommodation (non a/c single room with attached toilet) is available in campus at Rs.1000/- per night per person (for participants from government organizations) Rs.1500/- per night per person (for participants from private organizations). No catering facility, but couple of restaurants are nearby. Details of hotels around IISc campus can be provided on request.

For any other information contact the course instructor

Dr. P Raghuvver Rao
Principal Research Scientist
Department of Civil Engineering
Indian Institute of Science, Bangalore - 560012
Email: prvrao@iisc.ac.in
Phone : 080 2293 2816 Mobile : 9448787626

Tentative Programme

11th July 2019 (Thursday)

09.00 to 09.30	Registration
09.30 to 11.00	Lecture
11.00 to 11.15	Tea
11.00 to 13.00	Lecture
13.00 to 14.00	Lunch
14.00 to 15.45	Computer session
15.45 to 16.00	Tea
16.00 to 17.30	Computer session

12st July 2019 (Friday)

09.00 to 11.00	Lecture
11.00 to 11.15	Tea
11.00 to 13.00	Lecture
13.00 to 14.00	Lunch
14.00 to 15.45	Computer session
15.45 to 16.00	Tea
16.00 to 17.30	Computer session

13nd July 2019 (Saturday)

09.00 to 11.00	Lecture
11.00 to 11.15	Tea
11.00 to 13.00	Lecture
13.00 to 14.00	Lunch
14.00 to 15.45	Computer session
15.45 to 16.00	High Tea
16.00 to 17.00	Concluding session